Appl. No. 09/829,700 Amdt. Dated June 3, 2005 Reply to Office action of January 3, 2005

aid.

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (currently amended) A method for individualizing a hearing aid 2 in adaptation to a loudness perception of an individual, said method 3 comprising the steps of: 4 [[-]] measuring and quantifying loudness perception parameters of the individual, weighted by a positive first factor; 5 6 [[-]] weighting of normal loudness perception parameters by a 7 positive second factor; combining the weighted loudness perception parameters of the 8 9 individual with the weighted normal loudness perception 10 parameters to define a weighted loudness parameter; and 11 using the weighted loudness parameter for adjusting the hearing
- 2. (previously presented) The method as in claim 1, wherein compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency.

3. (currently amended) A method for individualizing a hearing

2 aid in adaptation to a loudness perception of an individual, said 3 method comprising the steps of: adjusting the hearing aid using one or both of (1) measured and 4 5 quantified loudness perception parameters of the individual weighted by a first factor and (2) normal loudness 6 7 perception parameters weighted by a second factor; and 8 adjusting compression and/or amplification in the hearing aid, for 9 which purpose the compression and, respectively, the 10 amplification are each determined as a function of 11 frequency, wherein

12

1

12 for determining the compression, the loudness perception of the individual is quantified by means of a HVLS/LOHL factor 13 14 which is determined by loudness scaling at a minimum of one 15 frequency. 4. (previously presented) The method as in claim 3, wherein the 1 2 HVLS/LOHL factor is modeled using the equation  $log_{10}(\alpha) = a_a \times HV/HL +$ 3  $b_a \times log (HV/HL) + VP_{consta} where$  $\alpha$  = a gradient of the loudness function, 4 5 HV/HL = a hearing loss in dB,  $a_a$ ,  $b_a$  = constant function parameter, and 6 7  $VP_{consta}$  = an individual function parameter which adapts the 8 HVLS/LOHL factor to data sampling points  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$ , ..., 9 and that  $VP_{consta}$  is determined on the basis of a loudness 10 scaling performed at a minimum of one frequency. (previously presented) The method as in claim 2, wherein for 1 2 determining the amplification, the loudness perception of the individual is quantified by means of an HVLO/HLLO factor which is 3 4 defined by loudness scaling at a minimum of one frequency. 1 6. (previously presented) The method as in claim 5, wherein the 2 HVL0/HLL0 factor is modeled using the equation 3  $L_0 = a_L \times HV/HL + b_L \times log(HV/HL) + VP_{constL}$ 4 where 5 a level of loudness=0,  $L_0$ 6 HV/HL =a hearing loss in dB, 7  $a_{t}$ ,  $b_{t}$  = a constant function parameter, and

HLO/HLLO function to the data sampling points  $L_{01}$ ,  $L_{02}$ ,  $L_{03}$ , ...,

VP<sub>constL</sub>

8

9

an individual function parameter which adapts the

Appl. No. 09/829,700 Amdt. Dated June 3, 2005 Reply to Office action of January 3, 2005

- 10 And that  $VP_{constL}$  is determined on the basis of a loudness scaling 11 performed at a minimum of one frequency.
- 1 7. (previously presented) The method as in one of the claims 4 to
- 2 6 and 11, wherein the hearing loss is used for determining the
- 3 frequencies at which loudness scaling is performed.
- 1 8. (previously presented) The method as in one of the claims 3 to
- 2 6 and 10 to 11, wherein the value of the weighted factors depends on
- 3 the assumed and/or determined accuracy of the loudness scaling data.
- 9. (previously presented) The method as in claim 8, further
- 2 comprising the selection of a value of 1/3 for the first factor and/or
- 3 a value of 2/3 for the second factor.
- 1 10. (previously presented) The method as in claim 2, wherein, for
- 2 determining the compression, the loudness perception of the individual
- 3 is quantified by means of a HVLS/LOHL factor which is determined by
- 4 loudness scaling at a minimum of one frequency.
- 1 11. (previously presented) The method as in claim 10, wherein the
- 2 HVLS/LOHL factor is modeled using the equation  $log_{10}(\alpha) = a_a \times HV/HL +$
- 3  $b_a \times log (HV/HL) + VP_{consta}$  where
- 4  $\alpha$  = a gradient of the loudness function,
- 5 HV/HL = a hearing loss in dB,
- $a_a$ ,  $b_a$  = constant function parameter, and
- $VP_{consta}$  = an individual function parameter which adapts the
- 8 HVLS/LOHL factor to data sampling points  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$ , ...,

- 9 and that  $VP_{consta}$  is determined on the basis of a loudness 10 scaling performed at a minimum of one frequency.
- 1 12. (previously presented) The method as in claim 1, further 2 comprising the selection of a value of 2/3 for the first factor and/or 3 a value of 1/3 for the second factor.
- 1 13. (new) A method for individualizing a hearing aid in adaptation 2 to a loudness perception of an individual, said method comprising the 3 steps of:
- 4 measuring and quantifying loudness perception parameters of the 5 individual, weighted by a first factor;
- 6 weighting of normal loudness perception parameters by a second 7 factor;
  - combining the weighted loudness perception parameters of the individual with the weighted normal loudness perception parameters to define a weighted loudness parameter; and
- using the weighted loudness parameter for adjusting the hearing aid,
  - wherein compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency, and
- wherein for determining the amplification, the loudness perception of the individual is quantified by means of one of an HVLO/HLLO factor and an HVLS/LOHL factor, which is defined by loudness scaling at a minimum of one frequency.

8

9

10

11

14

15

16

17